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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/722,875	11/26/2003	Katsuya Watanabe	10407-72US (A3083MT-US1)	1707

570 7590 08/29/2007

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EXAMINER	
PATEL, GAUTAM	

ART UNIT	PAPER NUMBER
2627	

MAIL DATE	DELIVERY MODE
08/29/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/722,875	WATANABE ET AL.	
	Examiner	Art Unit	
	Gautam R. Patel	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *8/7/07*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Response to Amendment

1. This is in response to amendment filed on 8/7/07.

2. claims 1-13 remain for examination.

Claim Rejections - 35 U.S.C. § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent thereof, subject to the conditions and requirements of this title.

the claimed invention is directed to non-statutory subject matter.

Claim 13 does start out with proper background such as a tangible computer readable medium [which supported by the specification]. However what is being claimed subsequent to the preamble is only a code and structure of the code itself, which is not patentable. There are no tangible results or practical application of that code that produces reults, which is being claimed.

Claim Rejections - 35 U.S.C. § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-13 are rejected under 35 U.S.C. § 102(e) as being anticipated by Manoh et al., US. patent Application 2004/0202084 A1 (hereafter Manoh).

As to claim 1, Manoh discloses the invention as claimed [see Figs. 4, 7-14, especially 4, 11 and 13] including a light source, a focusing section, a focus shifting section, a light receiving section, a focus error signal generating section and a control section, comprising:

a light source [fig. 4, unit 31];

a focusing section [fig. 4, unit 34-35] for focusing light emitted from the light source;

a focus shifting section [fig. 4, unit 35] for shifting the focal point of the light by changing the position of the focusing section perpendicularly to a data storage layer of a given optical disc in accordance with a control signal;

a light receiving section [fig. 4, unit 32] for receiving, at multiple areas, the light reflected from the data storage layer and generating light quantity signals representing quantities of the light received at the respective areas;

a focus error signal generating section [fig. 4, unit 51A] for generating a focus error signal based on the light quantity signals; and

a control section [fig. 4, units 51] for generating the control signal in response to the focus error signal such that the focal point of the light is transferred to a focus controllable range in which a focus control is able to be performed on the data storage layer, wherein the control section generates the control signal such that the focal point of the light being shifted toward the data storage layer is decelerated initially at a first acceleration and then at a second acceleration the absolute value of the second acceleration being smaller than that of the first acceleration and the control signal for decelerating the focal point of the light at the second acceleration at least includes a first type of pulses that increases the acceleration [fig. 11, pulse Aacce] and second type of pulses [fig. 11, pulse Adece] that decreases the acceleration, respectively [paragraphs 62-67; & 109 to 125].

5. The aforementioned claim 2, recites the following elements, inter alia, disclosed in Manoh:

the control section generates the control signal such that the focusing section is brought away from the optical disc and that the focal point stops shifting once entered the focus controllable range [paragraphs 62-67; & 109 to 125].

6. The aforementioned claim 3, recites the following elements, inter alia, disclosed in Manoh:

the control section generates the control signal such that the focusing section is brought toward the optical disc until the focal point of the light passes the focus controllable range and

then brought away from the optical disc once the focal point has passed the focus controllable range [paragraphs 62-67; & 109 to 125].

7. The aforementioned claim 4, recites the following elements, inter alia, disclosed in Manoh:

the control section generates the control signal such that until the focal point of the light passes the focus controllable range, the focal point being shifted is decelerated at the first acceleration and then at the second acceleration, and that once the focal point has passed the focus controllable range, the focal point stops shifting [paragraphs 62-67; & 109 to 125].

8. The aforementioned claim 5, recites the following elements, inter alia, disclosed in Manoh:

the control section generates the control signal such that the focal point of the light being shifted is decelerated at the first acceleration and then stops shifting once and that the focal point starts being shifted again in the same direction and then decelerated at the second acceleration [paragraphs 62-67; & 109 to 125].

1. The aforementioned claim 6, recites the following elements, inter alia, disclosed in Manoh:

the optical disc has a plurality of data storage layers [fig. 2], and wherein the control section generates the control signal such that the focal point of the light being shifted from one of the plurality of data storage layers, for which the focus control is performed, toward the data storage layer [paragraphs 62-67; & 109 to 125].

2. The aforementioned claim 7, recites the following elements, inter alia, disclosed in Tada:

The control section generates the control signal, in which the first type of pulses alternate with the second type of pulses sp that the focal point of the light is decelerated at the second acceleration [paragraphs 62-67; & 109 to 125].

3. The aforementioned claim 8, recites the following elements, inter alia, disclosed in Manoh:

the focus shifting section changes the position, acceleration and velocity of the focusing section according to the numbers, magnitudes and durations of the first and second types of pulses applied [fig. 14B 18B, 18C], and wherein the control section generates the control signal by adjusting at least one of the numbers, magnitudes and durations of the first and second types of pulses applied [paragraphs 62-67; & 109 to 125].

4. The aforementioned claim 9, recites the following elements, inter alia, disclosed in Tada:

the control section suspends the focus control on the data storage layer while generating the control signal [paragraphs 62-67; & 109 to 125].

5. The aforementioned claim 10, recites the following elements, inter alia, disclosed in Manoh:

the control section starts the focus control after having transferred the focal point to the focus controllable range [paragraphs 62-67; & 109 to 125].

6. The aforementioned claim 11, recites the following steps, inter alia, disclosed in Manoh:

the method comprises the steps of: (a) generating a first control signal in response to the focus error signal and supplying the first control signal to the focus shifting section such that the focal point of the light being shifted toward the data storage layer is decelerated at a first acceleration; and (b) generating a second control signal and supplying the second control signal to the focus shifting section after the step (a) such that the focal point of the light is decelerated at a second acceleration and that the absolute value of the second acceleration is smaller than that of the first acceleration and the control signal for decelerating the focal point of the light at the second acceleration at least includes a first type of pulses that increases the acceleration [fig. 11, pulse Aacce] and second type of pulses [fig. 11, pulse Adece] that decreases the acceleration, respectively [paragraphs 62-67; & 109 to 125].

7. As to claim 12, it is rejected for the similar reasons set forth in the rejection of claim 1, above. As to the added limitations Manoh discloses: a first shifting control section for generating a control signal in response to the focus error signal and supplying the control signal to the focus shifting section such that the focal point of the light being shifted toward the data storage layer is decelerated at a first acceleration; and

a second shifting control section for generating another control signal and supplying the control signal to the focus shifting section such that the focal point of the light is decelerated at a second acceleration and that the absolute value of the second acceleration is smaller than that of the first acceleration [paragraphs 62-67; & 109 to 125].

8. The aforementioned claim 13, recites the following steps, inter alia, disclosed in Manoh:

generating a first control signal in response to the focus error signal and supplying the first control signal to the focus shifting section such that the focal point of the light being shifted toward the data storage layer is decelerated at a first acceleration; and (b) generating a second control signal and supplying the second control signal to the focus shifting section such that the focal point of the light is decelerated at a second acceleration and that the absolute value of the second acceleration is smaller than that of the first acceleration [paragraphs 62-67; & 109 to 125].

ALTERNATE REJECTION

Claim Rejections - 35 U.S.C. § 103

9. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-13 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Tada et al., US. patent 6,370,093 (hereafter Tada).

As to claim 1, Tada discloses the invention as claimed [see Figs. 4-5, 7, 13-14, 18] including a light source, a focusing section, a focus shifting section, a light receiving section, a focus error signal generating section and a control section, comprising:

a light source [fig. 5, unit 31];

a focusing section [fig. 7, unit 46a] for focusing light emitted from the light source;

a focus shifting section [fig. 7, unit 46] for shifting the focal point of the light by changing the position of the focusing section perpendicularly to a data storage layer of a given optical disc in accordance with a control signal;

a light receiving section [fig. 7, unit 43] for receiving, at multiple areas, the light reflected from the data storage layer and generating light quantity signals representing quantities of the light received at the respective areas;

a focus error signal generating section [fig. 7, unit 46] for generating a focus error signal based on the light quantity signals; and

a control section [fig. 7, units 46 & 47] for generating the control signal in response to the focus error signal such that the focal point of the light is transferred to a focus controllable range in which a focus control is able to be performed on the data storage layer, wherein the control section generates the control signal such that the focal point of the light being shifted toward the data storage layer is decelerated initially at a first acceleration [Vbrk1] and then at a second acceleration [Vbrk2], the absolute value of the second acceleration being smaller [fig. 18D] than that of the first acceleration [col. 12, line 46 to col. 13, line 23; col. 16, line 36 to col. 17, line 8].

and second type of pulses [fig. 18C] that decreases the acceleration respectively [col. 12, line 46 to col. 13, line 23; col. 16, line 36 to col. 17, line 8].

Tada teaches all of the above elements including several levels of braking signals [see fig. 18C). Thus controlling the barking process and avoiding collision with disc of the objective lens. Thus solving the same problem as Applicants in multi-layer disc environment. Tada does not specifically teach that his embodiment has two acceleration pulses as claimed. However Tada does teach changing the magnitude of the acceleration pulse [col. 22, line 58 to col. 23, line 14].

Because Tada does teach changing the acceleration pulse just like he changes deceleration pulse, it would have been obvious to one of ordinary skill in the art to substituted

the changing of acceleration pulses to achieve the predictable result of controlling the lens movement in a more precise fashion and thus avoiding hitting the next layer.

NOTE: see fig. 18D and compare it to applicants figure 4B.

10. The aforementioned claim 2, recites the following elements, inter alia, disclosed in Tada:

the control section generates the control signal such that the focusing section is brought away from the optical disc and that the focal point stops shifting once entered the focus controllable range [col. 15, lines 36 to col. 16, line 35].

11. The aforementioned claim 3, recites the following elements, inter alia, disclosed in Tada:

the control section generates the control signal such that the focusing section is brought toward the optical disc until the focal point of the light passes the focus controllable range and then brought away from the optical disc once the focal point has passed the focus controllable range [col. 15, lines 36 to col. 16, line 35].

12. The aforementioned claim 4, recites the following elements, inter alia, disclosed in Tada:

the control section generates the control signal such that until the focal point of the light passes the focus controllable range, the focal point being shifted is decelerated at the first acceleration and then at the second acceleration, and that once the focal point has passed the focus controllable range, the focal point stops shifting [col. 15, lines 36 to col. 16, line 35].

13. The aforementioned claim 5, recites the following elements, inter alia, disclosed in Tada:

the control section generates the control signal such that the focal point of the light being shifted is decelerated at the first acceleration and then stops shifting once and that the focal point starts being shifted again in the same direction and then decelerated at the second acceleration [col. 15, lines 36 to col. 16, line 35].

14. The aforementioned claim 6, recites the following elements, inter alia, disclosed in Tada:

the optical disc has a plurality of data storage layers [fig. 2], and wherein the control section generates the control signal such that the focal point of the light being shifted from one of

the plurality of data storage layers, for which the focus control is performed, toward the data storage layer [col. 15, lines 36 to col. 16, line 35].

15. The aforementioned claim 7, recites the following elements, inter alia, disclosed in Tada:

the control section generates the control signal, in which the first type of pulses alternate with the second type of pulses so that the focal point of the light is decelerated at the second acceleration [fig. 18; col. 16, line 36 to col. 17, line 8].

16. The aforementioned claim 8, recites the following elements, inter alia, disclosed in Tada:

the focus shifting section changes the position, acceleration and velocity of the focusing section according to the numbers, magnitudes and durations of the first and second types of pulses applied [fig. 14B 18B, 18C], and wherein the control section generates the control signal by adjusting at least one of the numbers, magnitudes and durations of the first and second types of pulses applied [col. 15, lines 36 to col. 16, line 35].

17. The aforementioned claim 9, recites the following elements, inter alia, disclosed in Tada:

the control section suspends the focus control on the data storage layer while generating the control signal [col. 15, lines 36 to col. 16, line 35].

18. The aforementioned claim 10, recites the following elements, inter alia, disclosed in Tada:

the control section starts the focus control after having transferred the focal point to the focus controllable range [col. 15, lines 36 to col. 16, line 35].

19. The aforementioned claim 11, recites the following steps, inter alia, disclosed in Tada:

the method comprises the steps of: (a) generating a first control signal in response to the focus error signal and supplying the first control signal to the focus shifting section such that the focal point of the light being shifted toward the data storage layer is decelerated at a first acceleration; and (b) generating a second control signal and supplying the second control signal to the focus shifting section after the step (a) such that the focal point of the light is decelerated

at a second acceleration and that the absolute value of the second acceleration is smaller than that of the first acceleration [col. 15, lines 36 to col. 16, line 35].

Tada teaches all of the above elements including several levels of braking signals [see fig. 18C). Thus controlling the barking process and avoiding collision with disc of the objective lens. Thus solving the same problem as Applicants in multi-layer disc environment. Tada does not specifically teach that his embodiment has two acceleration pulses as claimed. However Tada does teach changing the magnitude of the acceleration pulse [col. 22, line 58 to col. 23, line 14].

Because Tada does teach changing the acceleration pulse just like he changes deceleration pulse, it would have been obvious to one of ordinary skill in the art to substituted the changing of acceleration pulses to achieve the predictable result of controlling the lens movement in a more precise fashion and thus avoiding hitting the next layer.

NOTE: see fig. 18D and compare it to applicants figure 4B.

20. As to claim 12, it is rejected for the similar reasons set forth in the rejection of claim 1, above. As to the added limitations Tada discloses: a first shifting control section for generating a control signal in response to the focus error signal and supplying the control signal to the focus shifting section such that the focal point of the light being shifted toward the data storage layer is decelerated at a first acceleration; and

a second shifting control section for generating another control signal and supplying the control signal to the focus shifting section such that the focal point of the light is decelerated at a second acceleration and that the absolute value of the second acceleration is smaller than that of the first acceleration [col. 12, line 46 to col. 13, line 23; col. 15, lines 36 to col. 16, line 35]. NOTE: Since unit 46 performs these both functions it inherently has these sections within it.

21. The aforementioned claim 13, recites the following steps, inter alia, disclosed in Tada:

generating a first control signal in response to the focus error signal and supplying the first control signal to the focus shifting section such that the focal point of the light being shifted toward the data storage layer is decelerated at a first acceleration; and (b) generating a second control signal and supplying the second control signal to the focus shifting section such that the focal point of the light is decelerated at a second acceleration and that the absolute value of the

second acceleration is smaller than that of the first acceleration [col. 12, line 46 to col. 13, line 23; col. 15, lines 36 to col. 16, line 35].

22. Applicant's arguments with respect to claims 1-13 have been considered but are moot in view of the new grounds of rejection.

NOTES/REMARKS

23. The examiner would like to thank the Attorney Mr. Sickles II, for explaining the Applicants position in detail.

24. Applicant's amendment necessitated the new grounds of rejection presented in this office action. Accordingly, **THIS ACTION IS MADE FINAL**. See M.P.E.P. § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Contact information

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gautam R. Patel whose telephone number is 571-272-7625. The examiner can normally be reached on Monday through Thursday from 7:30 to 6.

The appropriate fax number for the organization (Group 2600) where this application or proceeding is assigned is 571-273-8300.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Dwayne Bost, who can be reached on (571) 272-7023.

Any inquiry of a general nature or relating to the status of this application should be directed to the Electronic Business Center whose telephone number is 866-217-9197 or the USPTO contact Center telephone number is (800) PTO-9199.

GAUTAM R. PATEL
PRIMARY PATENT EXAMINER

Gautam R. Patel
Primary Examiner
Group Art Unit 2627

August 24, 2007